

spring or a weak or broken stopper arm and spring assembly.

Transmission fails to shift into reverse

If the transmission fails to shift into or operate in reverse properly, check the following possible causes. On FE and TE models, make sure the electric shift system operates properly before investigating the internal shift mechanism.

1. Incorrect reverse cable adjustment.
2. Loose or damaged reverse stopper arm.
3. Damaged reverse stopper shaft.

DRIVETRAIN

Noise is usually the first indication of a drivetrain problem. It is not always easy to diagnose the trouble by determining the source of the noise and the operating conditions that produce it.

Some clues as to the cause of the trouble may be gained by noting: whether the noise is a hum, growl or knock; whether it is produced when the ATV is accelerating under load or coasting; and whether it is heard when the vehicle is going straight or making a turn.

Drivetrain service procedures are covered in Chapter Eleven (front) and Chapter Twelve (rear).

CAUTION

Improperly diagnosed noises can lead to rapid and excessive drivetrain wear and damage. If you are not familiar with the operation and repair of the front and rear final drive assemblies, refer troubleshooting to a qualified Honda dealership.

Oil Inspection

Drain the gearcase oil (Chapter Three) into a clean container. Rub the drained oil between two fingers and check for the presence of metallic particles. Also check the drain bolt for metal particles. While a small amount of particles in the oil is normal, an abnormal amount of debris is an indication of bearing or gear damage.

Front Differential

Consistent noise while cruising

1. Low oil level.
2. Gear oil contamination.
3. Chipped or damaged gear teeth.
4. Worn or damaged ring gear bearing.
5. Worn or damaged ring gear.
6. Worn pinion gear or shaft side washers.
7. Worn or damaged ring gear and drive pinion.
8. Incorrect ring gear and drive pinion tooth contact.

Consistent gear noises during coasting

1. Damaged or chipped gears.
2. Gear oil contamination.
3. Incorrect ring gear and drive pinion tooth contact.

Gear noise during normal operation

1. Low oil level.
2. Gear oil contamination.
3. Chipped or damaged gear teeth.
4. Incorrect ring gear and drive pinion tooth contact.

Overheating

1. Low oil level.
2. Insufficient ring gear and drive pinion gear backlash.

Oil leak

1. Oil level too high.
2. Plugged breathe hole or tube.
3. Damaged oil seal(s).
4. Loose cover mounting bolts.
5. Housing damage.

Abnormal noises during starting or acceleration

1. Worn or damaged cone spring or shim.
2. Excessive pinion gear backlash.
3. Worn differential splines.
4. Excessive ring gear and drive pinion backlash.
5. Loose fasteners.

Abnormal noises when turning

1. Worn or damaged cone spring or shim.
2. Damaged driveshaft splines.
3. Worn or damaged cams or face cams.
4. Worn or damaged ring gear bearing.

**Rear Differential
Excessive Noise**

1. Low oil level.
2. Excessive ring gear and pinion gear backlash.
3. Worn or damaged drive pinion and splines.
4. Damaged driven flange and wheel hub.
5. Worn or damaged driven flange and ring gear shaft.

HANDLING

Poor handling will reduce overall performance and may cause loss of control and a crash. If the handling is poor, check the following items:

1. If the handlebars are hard to turn, check for the following:
 - a. Low tire pressure.
 - b. Incorrect throttle cable routing.
 - c. Damaged steering shaft bushing and/or bearing.
 - d. Bent steering shaft or frame.
 - e. Steering shaft nut too tight.
2. If there is excessive handlebar shake or vibration, check for the following:
 - a. Loose or damaged handlebar clamps.
 - b. Incorrect handlebar clamp installation.
 - c. Bent or cracked handlebar.
 - d. Worn wheel bearing(s).
 - e. Excessively worn or damaged tire(s).
 - f. Damaged rim(s).
 - g. Loose, missing or broken engine mount bolts and mounts.
 - h. Cracked frame, especially at the steering head.
 - i. Incorrect tire pressure.
 - j. Damaged shock absorber damper rod.
 - k. Leaking shock absorber damper housing.
 - l. Sagged shock spring(s).
 - m. Loose or damaged shock mount bolts.
3. If the rear suspension is too soft, check for the following:
 - a. Damaged shock absorber damper rod.

- b. Leaking shock absorber damper housing.
- c. Sagged shock spring.
- d. Loose or damaged shock mount bolts.
4. If the rear suspension is too hard, check for the following:
 - a. Rear tire pressure too high.
 - b. Incorrect shock absorber adjustment.
 - c. Damaged shock absorber damper rod.
 - d. Leaking shock absorber damper housing.
 - e. Sagged shock spring.
 - f. Loose or damaged shock mount bolts.
5. Check the following on the frame:
 - a. Damaged frame.
 - b. Cracked or broken engine mount brackets.
6. If the wheel is wobbling, check for the following:
 - a. Loose wheel nuts.
 - b. Loose or incorrectly installed wheel hub.
 - c. Excessive wheel bearing play.
 - d. Loose wheel bearing.
 - e. Bent wheel rim.
 - f. Bent frame or other suspension component.
7. If the ATV pulls to one side, check for the following:
 - a. Incorrect tire pressure.
 - b. Incorrect tie rod adjustment.
 - c. Bent or loose tie rod.
 - d. Incorrect wheel alignment.
 - e. Bent frame or other suspension component.

FRAME NOISE

Noises traced to the frame or suspension are usually caused by loose, worn or damaged parts. Various noises that are related to the frame are listed below.

1. The most common drum brake noise is a screeching sound during braking. Drum brake noises can be caused by:
 - a. Glazed brake lining or drum surface.
 - b. Excessively worn brake linings drums.
 - c. Warped brake drum.
2. Front or rear shock absorber noise can be caused by:
 - a. Loose shock absorber mounting bolts.
 - b. Cracked or broken shock spring.
 - c. Damaged shock absorber.
3. Some other frame associated noises can be caused by:
 - a. Cracked or broken frame.
 - b. Broken swing arm or shock linkage.

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